

# THE CANCER REVOLUTION

## **Additional Material for Appendix 1**

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### **More about Insulin Potentiation Therapy**

Insulin Potentiation Therapy (IPT) is a simple medical procedure that uses the hormone insulin, followed by chemotherapy and glucose to make chemotherapy drugs, in smaller doses, more effective, with few to no side effects.

There are no double-blind, placebo-controlled studies for IPT, but a lot of experience and positive case reports, world wide. We have almost 10 years of our own experience that is so positive that we integrated it into our cancer treatment concept (ICTC). IPT was developed as a result of a better understanding of the cancer physiology and how the body works. It was shown that cancer patients can be treated with less toxicity than occurs in conventional medicine.

The Mexican doctor Perez Garcia, MD, was the first who noticed that insulin, when combined with certain medications and nutrients, was useful for treating various health problems. He found that, when combined with low dose chemotherapy, insulin was very effective for treating cancer patients.

In order to understand how IPT works, it is important to first explain the cancer cell physiology and compare it to that of normal cells. Cancer cells have six times more insulin receptors on the surface of their membranes than normal cells, and ten times as many IGF-1 factors, or Insulin growth Factor-1 receptors. Insulin stimulates growth and the cell uptake of glucose for energy production. It also transports amino acids and vitamins into the cells. Cancer has a higher metabolism than normal cells and depends on sugar. It prefers mainly sugar and simple carbohydrates since it doesn't metabolise fats and proteins very well. Cancer cells are sugar robbers.

PET scans demonstrate that cancer has a higher need for sugar than normal. They show areas of increased metabolic activity in the body. In a PET scan, labeled sugar is injected, which then is selectively taken up by cancer because it has an elevated metabolism and a higher use for sugar; this, then, can be detected by the scanners. The labeled sugar molecules go to areas with increased metabolic activity, meaning that sugar is picked up much faster by them. When the sugar blood level drops after a certain dose of insulin is given to a patient, adrenaline and epinephrine is released. The patient feels hot, sweaty and sometimes drowsy; this occurs mainly when blood sugar is down to 50 mg/dl. We call this the 'therapeutic moment' or 'therapeutic window'. The tumour needs more sugar for its energy production supported by the higher concentration of insulin receptors, so it picks up sugar a lot faster, when insulin is given IV during IPT.